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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/783,112	02/14/2001	Josh N. Hogan	10971806-3	2220

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HEWLETT-PACKARD COMPANY
Intellectual Property Administration
P.O. Box 272400
Fort Collins, CO 80527-2400

EXAMINER

SEAL, JAMES

ART UNIT	PAPER NUMBER
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2135

DATE MAILED: 12/23/2003

3

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/783,112

Applicant(s)

HOGAN, JOSH N.

Examiner

James Seal

Art Unit

2131

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 February 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 10, 26 and 27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 10, 26 and 27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☒ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

1. This Action is in response to applicant's correspondence of 14 February 2001.
2. Please note that this applicant has been docketed to AU2131.
3. Amendment to the specification has been entered.
4. New Claims 26 and 27 have been entered.
5. Claims 2-9 and 11-25 have been cancelled.
6. Claims 1, 10, 26 and 27 are pending.

Oath/Declaration

It does not state that the person making the oath or declaration has reviewed and understands the contents of the specification, including the claims, as amended by any amendment specifically referred to in the oath or declaration.

It does not state that the person making the oath or declaration acknowledges the duty to disclose to the Office all information known to the person to be material to patentability as defined in 37 CFR 1.56.

Specification

7. With regards to the Cross Reference to Related Applications the omitted patent number should be included as an amendment with the next correspondence.

Drawings

8. With regards to Figure 1, it is not clear as to which element 10 refers. Examiner suggest a dotted line enclose the elements of the drawing which 10 refers.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

Art Unit: 2131

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 1, 10, 26, and 27 rejected under 35 U.S.C. 103(a) as being unpatentable over Monroe et. al. US 5293388 A, and further in view of Davis US 5825879 A and Barnes et. al. US 4172213 A.

11. As per claim 1, the limitation of a system comprising a bus see Monroe Figure 3, element 20, column 1, lines 17-25. The limitation of a host processor connected to the bus is disclosed by Monroe see element 80 (CPU) Figure 3. The limitation that the host processor (CPU) is programmed to perform error code correction is disclosed Column 7, lines 62-64. The limitation of a drive is disclosed in Monroe Column 1, lines 44-45 ; Figure 3, element 50. The limitation that the provides blocks of ECC encoded data is disclosed in Monroe Column 1, lines 56-57. Monroe is silent on the limitation that the data in addition to being compressed and error corrected is encrypted.

12. Davis discloses a disk drive with encrypted data stored on the disk for reason of copy protection for example see PC platform Figure 4. The basic layout is the same as Monroe (see Davis Figure 1, host process, disk controller subsystem and data bus) with the additional element of the SVCP a hardware security device for decryption and decompression of the disk (CD ROM) data see elements 228 and 220 Figure. Thus it would have been obvious to one of ordinary skill in the art at the time the made, to have modified the invention of Monroe with the teaching of Davis to provide for a device to allows the display DVD which are high resolution (therefore ECC) high data density (compressed) and Encrypted (because of the copy-protection, movies see Davis Column 1, lines 32-43; or intellectual property control such as software). Davis is silent

on the use of stream ciphers (an XOR) dealing mainly with block ciphers and public key ciphers.

13. Barnes discloses a encryption system for the insertion between data sets without modifying the control commands and communications protocols of the central processing unit Barnes Column 2, lines 31-39. This is accomplished by using an exclusive or (XOR) in which the "key" produces the original plaintext Barnes Column 6, lines 1-4; lines 2428 ; and Figure 1 (an XOR has the useful property that $(X \oplus Y) \oplus Y = X$ that is it is it's own inverse). Barnes extends the concept to selective (or partial encryption) thus allowing on part of the text to be encrypted and some not. This is often used in Try-before-you-buy software or sanitized FAX etc. . It would have been obvious to one of ordinary skill in the art at the time that the invention was made to have modified the Monroe/Davis which teaches the handling of encrypted, compressed data which employs the error correction protocols of Reed-Solomon, with the teaching of Barnes use of the XOR stream cipher encryption which allows the use of communication protocols without modifications because it would allow the error correction of Monroe to run in-tack while maintaining the security needed for copy-protection required by Davis. Thus the limitation that the XORed mask (stream encryption) ECC encoded data can be sent via the bus (element 20 figure 1 of Monroe) for error correction is met. Claim 1 is rejected.

As per claim 10, the limitation of performing ECC in the host processor is disclosed by Monroe Column 7, lines 62-64 such that the data is encrypted is disclosed by Barnes Column 2, lines 31-39. Claim 10 is rejected.

14. As per claim 26, the limitation of a system composed of a computer bus see Figure 3 element 20. The limitation of a host processor programmed to perform error code correction see Monroe Figure 3 element 80 and Column 7, line 62-64. The limitation of a drive Monroe Figure 3, element 50 and Column 1, lines 44-45 which provides data XORed with communication protocols including ECC (Barnes Column 2, lines 31-39) to the computer bus (Monroe Figure 3 element 20) to be delivered to the host CPU for error correction. Claim 26 is rejected.

15. As per claim 27, the limitation of a drive comprising a reader (Monroe Figure 3, element 50) with controller Monroe Column 7, lines 60-64 performing ECC on the encrypted XORed data Barnes Column 2, lines 31-39, to be outputted as a result of the controller Column 8, lines 6-9. Claim 27 is rejected.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James Seal whose telephone number is 703 308 4562. The examiner can normally be reached on M-F, 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gail Hayes can be reached on 703 305 9711. The fax phone number for the organization where this application or proceeding is assigned is 703 746 7239.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703 308 3900.

Application/Control Number: 09/783,112

Page 6

Art Unit: 2131

James Seal

James Seal

Examiner AU2131

15 December 2003